

Claims

1. A catalyst bed combination comprising a bed of a particulate copper-containing catalyst and, upstream of the catalyst bed, a guard bed of shaped units formed from lead oxide particles and a particulate support material.
2. A combination according to claim 1 wherein the support material is selected from alumina, hydrated alumina, chromia, zirconia, and titania.
3. A combination according to claim 1 or claim 2 wherein the support material comprises a mixture of two or more hydrated aluminas.
4. A combination according to any one of claims 1 to 3 wherein the shaped units are formed from a composition containing a processing aid.
5. A combination according to any one of claims 1 to 4 wherein the shaped units have a lead content of 5 to 75%, by weight of lead (expressed as metal).
6. A combination according to any one of claims 1 to 5 wherein the shaped units have a lead content of 30 to 75%, by weight of lead (expressed as metal).
7. A combination according to any one of claims 4 to 6 wherein the shaped units are formed from lead oxide, hydrated alumina and graphite.
8. A combination according to any one of claims 1 to 7 wherein the lead oxide used to form the shaped units has an average (by weight) particle size below 50  $\mu\text{m}$ .
9. A process for performing a catalytic reaction using a bed of a copper-containing catalyst, comprising passing a process gas through a guard bed of shaped units formed from particles of lead oxide and a particulate support material and then passing said process gas through the bed of copper-containing catalyst.